NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

Agricultural Fuel Containment Facility
(No.)
239-i

Definition

An agricultural fuel containment facility is a permanent structure with an impervious catch surface designed to prevent contamination of natural resources due to leakage or spillage of agricultural fuels.

Purpose

To prevent contamination of soil, water, and other resources by leakage or spillage from agricultural fuel storage tanks.

Conditions Where Practice Applies:

This practice is applicable:

1. Where fuels for agricultural operations need to be stored.

2. Where spillage of fuels would pose a threat to soil, water, or other resources.

3. Where soils and topography are suitable for construction.

Federal, State, and Local Laws

Design and construction activities shall comply with all federal, state, and local laws, rules, and regulations governing activities in or along streams, pollution abatement, health, and safety. The owner or operator shall be responsible for securing all required permits or approvals and for performing in accordance with such laws and regulations. NRCS employees are not to assume responsibility for procuring these permits, rights, or approvals, or for enforcing laws and regulations. NRCS may provide the landowner or operator with technical information needed to obtain the required rights or approvals to construct, operate, and maintain the practice.

Permits may be required from the following agencies:

1. West Virginia Department of Health

2. West Virginia Department of Agriculture

Planning Considerations

Effects on Water Quantity and Quality

This practice has very little effect on the quantity of surface and ground water.

This practice may reduce the amounts of gasoline and diesel fuels entering surface and ground water. This is accomplished by containing all spills and leaks where they are detectable and repairs can be made; keeping fuels out of contact with the soil to prevent percolation into ground water; keeping rain and surface water away from spilled fuels so they will not become contaminated.

Design Criteria

The facility shall be leak-proof and shall be composed of a monolithic concrete floor and curb.

No-seepage concrete shall be placed at a slump no greater than 3 inches, shall contain 5 to 8 percent air entrainment, and shall be a 4000 psi design mix. Vibration is required to consolidate the concrete.

If concrete is placed that does not meet the above conditions, a surface sealer shall be applied to the concrete. The sealer shall

form an impervious barrier and shall not deteriorate when in contact with fuel.

There shall be no openings for posts, drains, etc. in the curb or floor that would allow the accidental release of fuel.

The facility shall be roofed and the roof shall be clearspan from outside the curb.

Provision shall be made to prevent rain from being blown into and accumulating in the facility, yet free air circulation must be maintained.

The 25 year-24 hour storm runoff shall be diverted from entering the facility.

The facility shall not be located in the 100-year floodplain or a wetland area.

The containment volume of the concrete curb shall be 105 percent of the total volume of all storage tanks in the facility.

Structural design of the building, roof, concrete pad, floor, and curb shall be in accordance with the criteria listed in practice standard 313 (Waste Storage Facility). Standard designs are available and encouraged for use.

It is strongly recommended that a concrete pad be provided as a parking/fueling area adjacent to the containment facility. The pad should be depressed in the center to catch and contain accidental spills during fueling. A "large-spill" overflow weir should shunt large spills from the pad into the main facility. This allows rainfall on the pad to be retained outside the facility for evaporation or removal.

Plans and Specifications

Plans and specifications for constructing Fuel Containment Facilities shall be prepared in accordance with the criteria listed in this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

Operation and Maintenance

Operation and maintenance of the facility will consist of periodic inspections to assure that no cracks have occurred in the concrete that would allow fuel to enter the soil or groundwater.

If the facility has been damaged, it shall be repaired promptly to prevent the accidental loss of fuel outside the structure.

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE GENERAL SPECIFICATIONS

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Foundation Preparation

All trees, brush, stumps, stones, fence rows and other obstructions shall be removed from the building area and disposed of in specified disposal areas in a manner that will not cause pollution to ground or surface water or interfere with drainage patterns or farming operations. Sod and topsoil shall be removed from the building area and stockpiled. Any soft or saturated material shall be removed and disposed of as directed by site conditions.

Earth Placement and Compaction

Any depressions in the foundation area shall be backfilled and compacted to the same density as the surrounding material to prevent uneven settlement. Fill material shall be placed and spread in lifts of 6 inches and compacted by at least one pass of the equipment used for grading the site. The fill material should be moist, not dry or saturated, to facilitate compaction.

Concrete

Concrete materials, reinforcing steel, and construction methods shall be as specified on the drawings or in the specifications.

Timber Fabrication

Structural timber and lumber shall conform to the sizes and lengths shown on the drawings. All framing shall be true and exact. Timber and lumber shall be accurately cut and assembled to a close fit and shall have even bearing over the entire contact surfaces. No open or shimmed joints will be accepted. When possible, surfacing, cutting, and boring of timber and lumber should be done before treatment. If cutting of treated lumber is necessary, all cuts and abrasions shall be carefully trimmed and then coated with at least three (3) coats of wood preservative.

The facility shall be constructed to the line, grade, and section shown on the plans.

All materials shall be in new condition. Materials must conform to applicable material specifications.

Construction operations shall be carried out in a manner such that air, soil, and water pollution; and erosion; will be minimized and held within legal limits.

The job shall be completed in a workmanlike manner and present a finished appearance when completed.